

# TAC ATTACK

FEBRUARY 1982



# FEB

READINESS IS OUR PROFESSION



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COMMANDER

**LT GEN THOMAS H. McMULLEN**  
VICE COMMANDER

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# Angle of Attack



According to legend, on February 2 the ground hog emerges from hibernation. If he sees his shadow, he crawls back in his den because there'll be six more weeks of winter weather. Doesn't it seem odd that the omen for bad weather is a sunny day that causes shadows?

In flying we have what we call a "sucker hole." That's a break in the bad weather that entices you to fly into it and then closes behind you. The sun shining through can be a trap.

Maybe there's a lesson here. When everything seems sunny, it's no time to relax our guard. The

fact that you haven't had a mishap lately doesn't mean you can't learn from these others that have had mishaps. "TAC Tips," "Chock Talk," "Down to Earth," and "Weapons Words" are intended to prevent future mishaps. If you look closely, you might see your shadow there.

Let's prepare ourselves for six more weeks of bad weather, but let's hope the sun keeps shining. By avoiding complacency, we can help it stay sunny.

*Richard K. Ely*  
RICHARD K. ELY, Colonel, USAF  
Chief of Safety

# Wrong Pilot, Wrong Day



The pilot was scheduled for weekend duty as supervisor of flying (SOF). But the pilot originally scheduled to fly weekend FCFs (functional check flights) became unavailable. So this pilot found someone else to pull his SOF duty while he flew an FCF. It was a decision he later came to regret.

When he preflighted the bird, he found a discrepancy: instead of 50 gallons of fuel in the tip tanks as required by local directives, there were 150 gallons in the right tank and 185 gallons in the left. But the pilot pressed on. He computed his takeoff data while taxiing out. He came up with an acceleration check speed of 102 knots, and he estimated an extra 300 feet of takeoff roll would be needed because he had a 10-knot tailwind.

As he turned onto the runway, the left strut compressed. After the pilot released brakes, the bird pulled to the left. The pilot had anticipated that because the strut was low; he counteracted it with right brake. He used the brakes to keep the aircraft on line until about 60 knots, when the rudder was effective enough to keep the airplane tracking down centerline. At about the same time, the nosewheel began to shimmy.

At the 2,000-foot checkpoint, the aircraft didn't make the minimum acceleration speed. But the pilot figured the low acceleration was due to the braking he'd had to do, combined with the tailwind; so he continued. He held the stick to the right to raise the left wing until the aircraft reached 105 knots, at which point he brought the stick back to neutral. When he did, the left strut again compressed.

With the left strut compressed and the whole airplane shaking from the nosewheel shimmy, the pilot decided to abort the takeoff. He had about 6,000 feet of runway remaining. He pulled the throttle to idle and lowered the speed brakes, contrary to the Dash One abort procedures. He held full aft stick and attempted only light braking for the next 2,000 feet.

Then, as the runway in front of him got shorter, he began hard braking and raised the canopy. When he reached the 1,000-foot-remaining marker with a speed of 70 knots, the pilot knew he was in trouble. Expecting an imminent barrier engagement, he decided to lower the canopy. He had to lower his head to find the canopy switch; as he did, he took his feet off the brakes. When he looked back up, he was about 500 feet short of the barrier. He closed the throttle and turned off the battery.

The bird, with its speed brakes still down, hit the MA-1A barrier 40 feet right of centerline. The cable hit the UHF antenna and the speed brakes; then it caught on the right gear door and right main strut. The right main gear collapsed, and the right tip tank hit the concrete and ruptured. The aircraft slid down the overrun and off into the dirt, finally coming to a rest after turning 150 degrees and pointing back where it had come from. The pilot turned the battery back on, opened the canopy, and climbed out of the

aircraft, uninjured.

It turned out that the pilot had been originally qualified to fly FCFs but was no longer current. The takeoff data he computed while taxiing wasn't accurate. The actual acceleration check speed should have been 79 knots, instead of 102 knots. The additional distance for the tailwind should have been 500 feet. The imbalanced fuel load created the strut problem. When the pilot decided to abort at high speed, he needed to begin maximum braking immediately. He could then have stopped short of the barrier. If he had retracted the speed brakes and not gotten wrapped up with using the canopy for a speed brake, he might have made a good barrier engagement.

In short, the wrong pilot tried to fly an airplane with the wrong configuration, based his takeoff on the wrong data, and used the wrong procedures when he aborted. All our rules and procedures won't do us any good if they're not followed. ➤



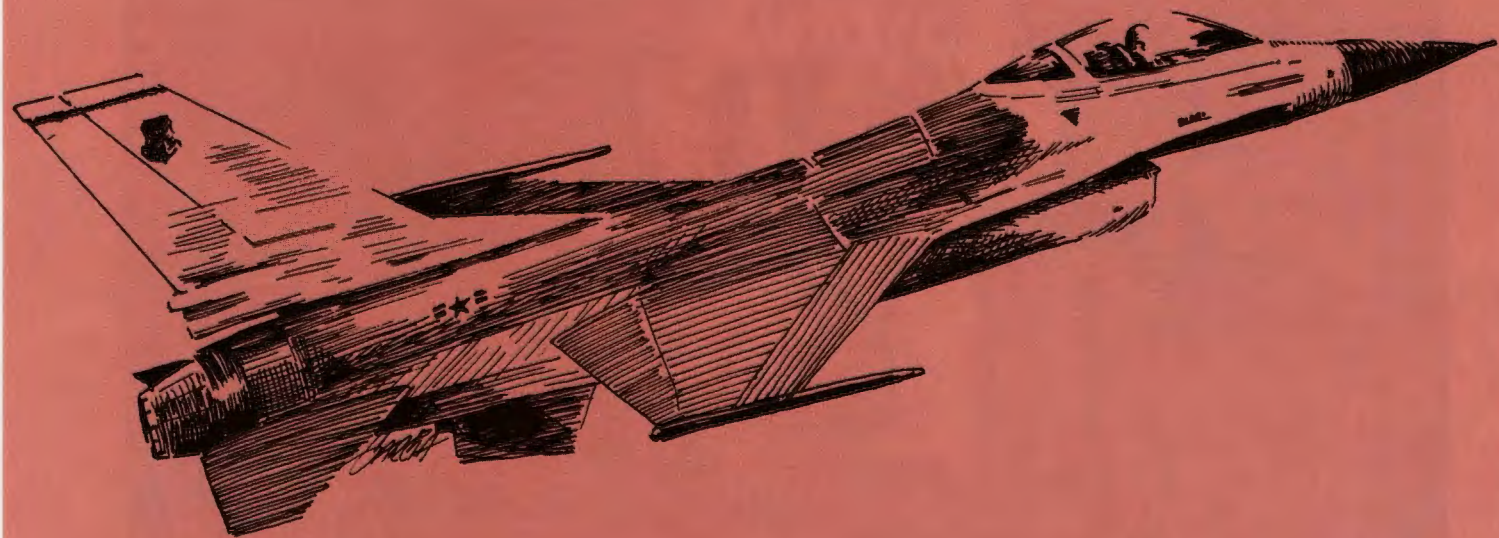
# Aircrew of Distinction



Capt Scott C. Harrison, 474 TFW, Nellis AFB, NV

**Capt Scott C. Harrison**  
474 TFW, Nellis AFB, NV

On 10 June 1981, CAPT SCOTT C. HARRISON was leading three F-16s on an air-refueling and surface-attack mission. One minute after takeoff, Captain Harrison felt a sudden loss of thrust in his aircraft and saw the rpm rolling back and the engine temperature steadily declining. He immediately pulled the throttle to idle, and began climbing toward home base. After telling his wingman about the problem, he alerted the tower that he was returning for an emergency landing and departure-end barrier engagement. Captain Harrison advanced the throttle but could obtain no more than 80 percent rpm, which was insufficient to sustain level flight. Realizing he did not have the altitude to make high or low key, Captain Harrison entered a flameout pattern from a base key position, which was halfway through the base turn above 2,000 feet. He maneuvered the aircraft on final to execute a safe landing, engaging the departure-end barrier. Post-flight inspection of the engine revealed metal shavings in the main fuel pump which restricted fuel flow and could have caused total fuel starvation to the engine. Captain Harrison's quick thinking and skillful flying saved the aircraft and prevented possible loss of life. His actions qualify him as the TAC Aircrew of Distinction.



# THE OLD BUZZARD



## 27 TFW STAN-O-GRAM

Jonathan Livingstone Buzzard stared at the flight of cranes and shook his head. Two was ahead of lead; Three was so far out of formation as to not even be considered. Four appeared to have problems deciding where to fly. He heard lead check the flight and heard the random responses. "Buffs," he said (big ugly flying friends). "If they were steely-eyed killers like us buzzards, they would be banished from the flock."

JLB looked at his flight perched in perfect spacing

on his branch. He briefed them on the upcoming training flight, making sure each member thoroughly knew the mission. He gave the windup and all birds ruffled their feathers in unison. The sparrow on the nearby telephone wire gave them the numbers as JLB called the flight to tower. The owl on the top branch searched the horizon for conflicting traffic and cleared the flight for takeoff. "Buzzard Flight, channel one."

"Two."

"Three."

"Four."

JLB checked the flight in.

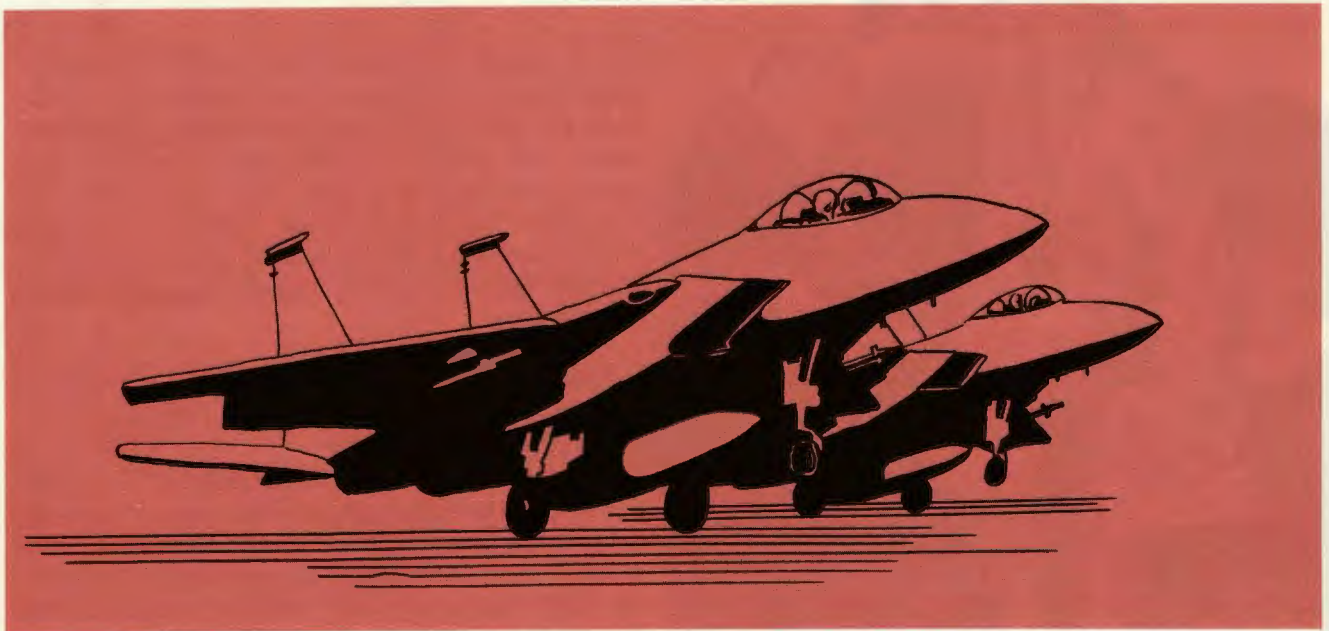
"Four, why is your red feather rotating? Son, you don't make so much as the smallest dropping unless you see me do it. Buzzard Flight, channel five."

The flight took off with the appropriate spacing and did a trail departure. Each member rejoined in sequence in tight fingertip. Four elected to go to route, but was quickly returned to fingertip following a brief change to channel one. By the time the flight returned to the pattern, the check-ins were crisp, the formation tight, and each member took pride in the flight as it came up initial, pitched with perfect spacing, and perched in the oak tree.

Old Jonathan Livingstone Buzzard sat around the stag bar that night, sipped Anteaters on the rocks, and reflected on the importance of formation discipline. Formation leads must exercise control over their flights at all times. A good leader takes pride in taxiing with matching wingspreads, crisp check-ins, and flying the mission as briefed; and he gives a full debriefing after every flight. Leaders must take the wingmen aside and explain their errors. Being a good wingman is a prerequisite for becoming a good flight lead; and when all the old buzzards have retired, formation discipline and pride will be up to the young birds.

# F-15 FORMATION LANDINGS

F-15 Formation Landings



**By Maj Charles I. Maas  
PACAF Flight Safety**

Remember way back when your UPT IP kept harping about the difference between technique and procedure? Stuff it, you thought to yourself, I'm working too hard just to pass my next checkride to worry about that kind of nonsense. But now that you're older (and much wiser, of course), maybe it wouldn't hurt to give it some thought.

Case in point: Two Eagle drivers are flying a formation approach to a full stop. During the approach, the wingman slides forward of the specified fingertip position while also positioning himself vertically level with his leader. In an effort to fly a "really good" approach, the wingman moves in a little closer

than normal (that's not hard to do since the roughly 50 feet from canopy to canopy in fingertip formation sure does seem wide). Everything looks good till somewhere near touchdown when a small gust of crosswind rapidly reduces wingtip separation to less than zero. Result—a damaged RWR antenna and several dents and creases in a pair of wingtips. "Lucky" is a gross understatement. But hang on a minute. Why did this happen?

The quick and easy answer is that the wingman blew it: He didn't maintain the required wingtip clearance. And in the final analysis, that's exactly what happened; but he had a little help getting there.

This part of the discussion gets down to the difference between techniques and procedures. Procedures are those action descriptions that clearly define how you're supposed to handle your machine. Techniques refer to your personal way of doing all



the other little tasks that are not specifically covered by procedures. That distinction isn't always well understood, and at times the guy with the "can do" attitude loses sight of the difference altogether. In his zest for getting the job done (and, often, looking good while doing it), he forgets that procedures are generally specified for a good reason. Sometimes, he may not like the reason or understand the reason; or he may not care about the reason basically because he thinks it doesn't apply to him—he's too good to be bound by such mundane matters.

A lot of techniques become procedures in some fliers' minds. "We've done it that way since time began" or "I don't care what the book says, this is a better way to do it" are the replies.

Let's look at this incident. There's good reason to want your wingman to touch down at about the same time you do during a formation landing. You certainly don't want him landing in the overrun. So stack him level as you come down final, just like the book says. Now, how about the line abreast position that is so convenient for the leader? That not only lets lead see the wingman almost without turning his head, but it also helps keep the wingman out of the overrun. But one thing it does *not* do is provide adequate margin for error should the wingman misjudge his lateral

separation or should other factors cause that separation to be suddenly reduced during short final and touchdown. If you're line abreast and you move into lead, you're going to hit him if wingtip clearance goes to zero. If you're flying the position described in the book, you can have a good deal of wingtip overlap without touching since you're displaced for and aft. And when it comes right down to it, having the wingman touch down a few feet aft surely isn't going to put him in the overrun if you're landing in the touchdown zone. It also gives both of you more options should some kind of directional control problem develop. And believe me, always having an out is not chicken, it's smart.

The bottom line in this discourse is that you might benefit from taking a look at how you fly your airplane. Which actions are procedures, and which are techniques? Which techniques are smart and give you the most options? If that pair of Eagle drivers had been a little smarter, they would have increased their options. Then when the wingman discovered that, son-of-a-gun, he really didn't have calibrated eyeballs, he would have had some margin for error. Funny thing, the *procedure* would have provided for that margin—but his *technique* eliminated it. Smart? You be the judge.



# TIPS

Defer not till to-morrow to be wise,  
To-morrow's sun to thee may never rise.

—Congreve

## **P-R-I-C-E:**

### ***Better Late Than Never***

The pilot was flying a deployment mission which required air refueling. During the fourth refueling, after 2½ hours at 27,000 feet, the pilot noticed he was not as stable in his positioning on the boom as he had been. After refueling, the flight climbed to 29,000 feet. Shortly after level off, the pilot noticed that he was feeling lightheaded and was losing his peripheral vision. He selected 100 percent oxygen and checked cabin pressure; it showed about 12,000 feet cabin altitude. The weapon systems officer (WSO) didn't feel any symptoms of hypoxia; he said he felt fine. The pilot did a P-R-I-C-E check and found that the regulator showed constant flow with either "Test Mask" or "Emergency" selected. He declared an emergency and descended to lower altitude. The symptoms went away as the altitude decreased, and the pilot flew a straight-in approach and landed without problem.

The cause of this fairly mild case of hypoxia was the disconnecting of the emergency oxygen hose at a B-nut fitting just above the quick disconnect. Ambient air was drawn into the oxygen mask through the open fitting. The long-term exposure to cabin altitude above 10,000 feet with an inadequate concentration of oxygen at the mask led to the hypoxia.

Of course, the P-R-I-C-E check which showed the leak at 29,000 feet after 2½ hours could also have worked on the ground before the flight—if it had been done then.

...interest items,  
mishaps with  
morals, for the  
TAC aircrewman

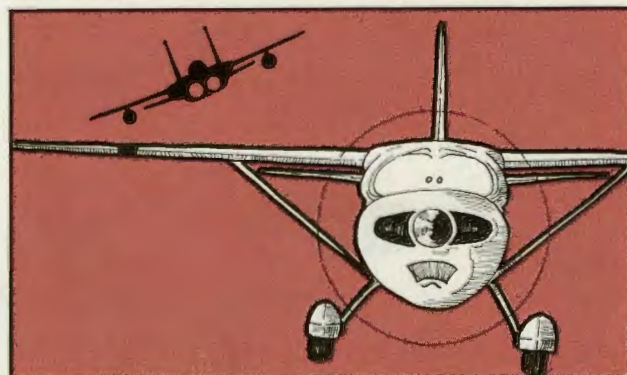
## ***Nitpicking Terminology***

"Artee Five-One, turn left heading two-nine-zero for downwind."

"Five-One."

Pretty routine radio conversation, isn't it? Maybe the terminology isn't quite proper, but that's nitpicking, right? Let's see.

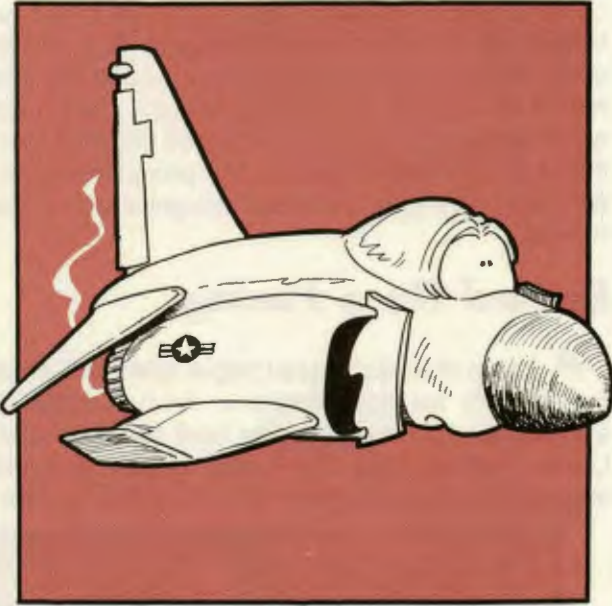
Because the controller said two-nine-zero instead of two-*niner*-zero, the pilot misunderstood him. He flew a heading of 250 degrees (two-*five*-zero). Because the pilot didn't read back the heading, the controller didn't know the pilot heard the wrong heading. A heading of 290 degrees would have kept the pilot clear of a light aircraft training area; the heading of 250 degrees put him in the middle of it. A near miss with a light aircraft was the result.



He was lucky. Years of experience have gone into the developing of standard radio terminology to avoid confusion. Many of those experiences were tragic. There's no reason for us to repeat them; the lessons have already been learned—if we'll just apply them.

## Abort by the Numbers

In just over a month and a half, this one F-4E's right engine flamed out three times during flight.



During that time maintenance investigators had a hard time duplicating the problems. They'd rig the throttle, but they couldn't pinpoint the problem, which turned out to be a bad main fuel pump.

Oddly enough, on six different occasions during this same period, pilots wrote the airplane up for the fuel flow being out of limits on start. Sometimes it was low, sometimes it was high. But each time the engine started, and so the aircrews all accepted the airplane for flight. Finally, an aircrew refused the airplane. The day after the third flameout, an aircrew ground aborted for low fuel flow on start—the fuel flow read zero at first, then rose to 100 pph as the engine lit. After this ground abort, the maintenance troops removed and replaced the main fuel pump. That finally solved the engine's problems.

The aircrews who accepted the airplane with the fuel flow problem weren't ignorant; they knew the tolerances and wrote the problem up. But they didn't consider it worthy of an abort. After all, the Dash One doesn't say you *have* to abort—it just says what the parameters are. Maybe when you have two engines, you aren't as fussy about them. But we've always felt that a system as critical as an engine has to meet all parameters. If we're going to memorize all those numbers for the stan-eval tests, we might as well make them mean something.

## Do Unto Others

During a 300-hour-phase inspection of an F-4D, the inspectors found damage caused by overstress of the aircraft. Two speed-brake fittings were broken, an engine upper brace assembly was broken, doors 81R and 82R were damaged, the left engine gearbox had dropped down on the engine, numerous attachment fittings to the left engine were broken, the right engine upper rail assembly was warped, and the right engine had possible internal damage. There were also two cracks in the right wing BLC duct rain seals and quite a bit of sheet metal damage.

The overstress appears to be the result of a hard landing. It wasn't discovered until phase inspection because the aircrew didn't write it up.

How do you like the idea of unknowingly flying an airplane in that condition? Don't like it? Then do unto others accordingly: If you over-G it or land it too hard, write it up.

## Torrid Tired Tires

An OA-37 was returning home from depot. The flight plan included two stops en route for fuel. Shortly after takeoff from the first refueling stop, the pilot noticed fuel leaking from a pylon fuel cap that was improperly seated. The pilot returned and landed after 15 minutes of flight. He had the fuel cap tightened and was airborne again after only 15 minutes on the ground. He continued on to his next refueling stop.

There he landed, smoothly and on speed. At first the airplane felt strange, but then it seemed all right. He raised the nose for aerodynamic braking. Shortly afterwards the aircraft pulled left. Several small objects flew by the canopy. The pilot immediately



# TAC TIPS

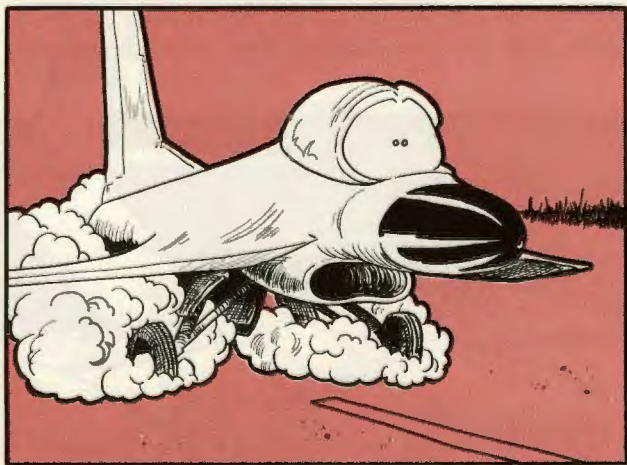
lowered the nose, engaged the nosewheel steering, and applied right brakes, all with little or no effect. The airplane ran off the runway at about a 90-degree angle. It came to rest in the grassy infield, and the pilot climbed out, uninjured.

The left main tire had failed at the sidewall, which showed signs of high heat and melting. Apparently, the tire was flat before landing. It had failed because of the quick stop-and-go at the first refueling stop. The wheels had heated up, as they normally do, during the taxi out and takeoff. Maximum heat build-up occurs in 10–15 minutes; that's when the pilot landed, heavyweight. In another 10–15 minutes, he took off again. The repeated heat stress caused the blowout bolts to melt enough to partially deflate the tire while the airplane was cruising to its next stop. On landing, the flat tire destroyed itself.

We just don't realize how much heat stress our airplane's wheels and tires go through as we taxi, take off, and land, especially at heavy weights. When the wheels don't get a chance to cool off before they're stressed again, they fail. Then things get hot for us.

## Got It Made—Almost

Thirty minutes after takeoff, an F-16 lost B system hydraulics. The pilot declared an emergency, lowered the gear with the alternate extension, and made an uneventful landing. During the landing roll, he used full aerodynamic braking as long as he could, and then he wheel braked with one long, heavy application from the emergency accumulator. The airplane rapidly slowed to 40 knots. The braking

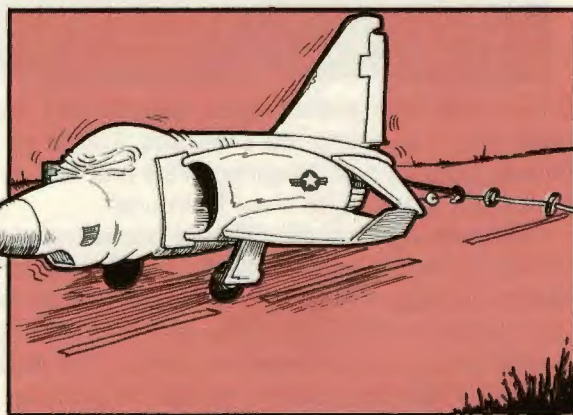


action felt so good that the pilot decided to turn off on a taxiway instead of stopping straight ahead on the runway.

The pilot pulled off onto the taxiway and stopped, holding the brakes with light toe pressure. He waited about 30 seconds for the emergency response ground crew to chock the aircraft. Before they could chock it, the F-16 began rolling. The pilot had no brakes left. He shut down the engine. The aircraft continued to roll, turned slightly right, and hit the right rear of the camper top on an EOD truck. The aircraft continued to turn until it was about 90 degrees right; then it finally came to a stop. The pilot climbed out, probably wishing he'd stopped straight ahead on the runway.

## Hooked On a Feeling

A 2-ship of RF-4s had just begun takeoff roll when the leader's tail hook dropped down. Number 2 aborted and told the leader his hook had extended. Leader also aborted, but it was too late to avoid engaging the approach-end BAK-12 arresting gear.

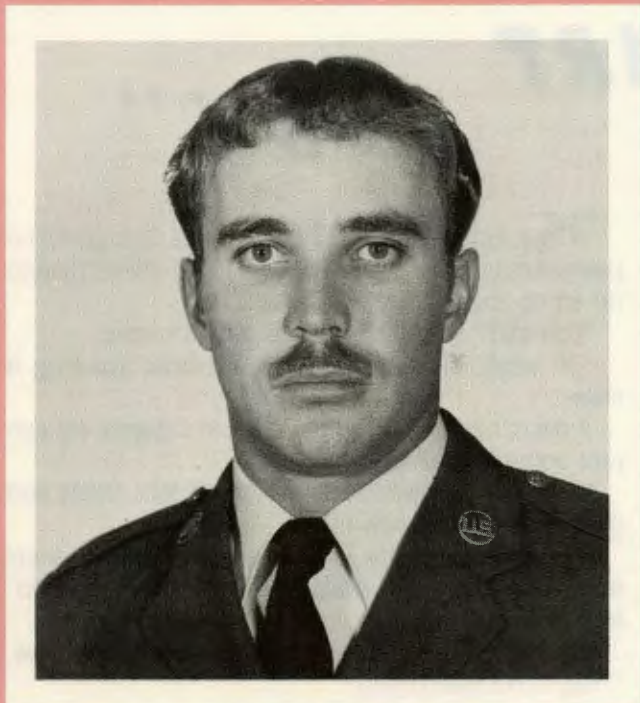


Because he was positioned on the left side of the runway, he took the gear left of centerline. Although the gear should be able to take an off-center engagement, this one broke. Fortunately, it didn't whip across either the leader or the wingman.

The tail hook was found to have a bad pawl assembly, which didn't securely lock the hook up. When the pilot had preflighted, the hook was down; so he couldn't check the locking assembly. After he started the right engine, the pilot raised the hook. But he couldn't get an up-and-locked indication. He had to recycle it three times to get it to show up-and-locked.

Sometimes, the plane does its best to warn us that something's wrong. It pays to listen and get the problem checked. Don't get hooked on assumptions.

# TAC Safety Awards



SrA Mark B. Crenshaw



A1C Vito J. LaBrecque, Jr.

## CREW CHIEF SAFETY AWARD

**S**RA MARK B. CRENSHAW and A1C VITO J. LABRECQUE, Jr., 49th Aircraft Generation Squadron, 49th Tactical Fighter Wing, Holloman Air Force Base, New Mexico, are this month's winners of the Tactical Air Command's Crew Chief Safety Award. While launching an F-15 aircraft, Airmen Crenshaw and LaBrecque extinguished a fire on the wing of the aircraft and controlled the situation until the fire department arrived.

Airman Crenshaw was on the intercom with the pilot. When the pilot engaged the jet fuel starter to start the right engine, Airman LaBrecque went up the boarding ladder to remove the canopy strut. As the right engine accelerated, an explosion and flash fire erupted on the forward part of the left wing. The explosion ripped apart the wing's leading edge and

hurled two panels and other debris from the aircraft. Airman LaBrecque told the pilot the aircraft was on fire, jumped from the ladder, and seized the fire bottle. Though struck and injured by flying debris, Airman Crenshaw stayed on the intercom to confirm the location and severity of the fire until the pilot could safely leave the airplane. Airman Crenshaw then assisted in fighting the fire. Airmen Crenshaw and LaBrecque extinguished the fire and remained on fire alert until relieved by the fire department. Their quick response, teamwork, and courage provided safety for the pilot during ground egress, minimized the damage to their aircraft and adjoining aircraft, and prevented loss of life or injury to the maintenance personnel in the area. They have earned the TAC Crew Chief Safety Award.

# "ONCE YOU START DOWN"

By Sgt Dale J. Nusbaum  
507 TAIRCW Safety



"Hey, Harry, it's snowing," chirped George as he peered out the window. "Let's go to the ski lodge and do some shooshin."

"You ski?" asked Harry with raised brows.

"Oh yeah, all the time," said George, imitating a skier.

"I don't have any equipment, but I guess we can rent some," commented Harry.

"Yeah, sure, they have everything; let's dress and go," agreed the Snow Flake.

They arrived at the lodge and went to the rental shop, surveying the equipment for what they needed.

"Boy, look at all this neat stuff!" exclaimed George. "They have everything."

"Yeah, we need good quality and well-fitting equipment," responded the Safety Specialist.

"I know, make sure the boots fit, the bindings are tight, and the skis are the right type," George said in an irritated voice.

"Well, you know how your luck runs," reminded Harry.

"I'm going to surprise you this time," babbled the Red Cross Renegade. "I know what I'm doing on skis."

"I hope so, 'cause once you start down . . ." Harry's voice trailed off. They got on the chair lift and rode to the top.

"How long has it been since you went skiing?" inquired Harry, checking his bindings.

"Been about five years," mumbled George, clearing his throat and hoping Harry wouldn't hear.

"I heard that. Just to be safe, we should take a

# GEORGE LEARNS THE AGONY OF DEFEAT

couple practice runs on the novice slope." Harry motioned towards the less difficult slopes. "Did you check your bindings and boot straps?"

"Oh, come on. Skiing is like riding a bike; once you learn, you never forget."

"I still think it's a good—Hey! Where you goin'?"

"See you at the bottom!" shouted George as he lunged down the expert slope.

Oh, no! I better catch him before he kills himself, thought Harry.

George sure is going to surprise Harry and probably himself. An expert slope is exactly what it implies—a slope for experts. The run is steeper, longer, and takes more physical endurance. George seems to have forgotten this.

Man, this is the life, zipping down the side of a mountain, the wind in your face, the snow swishing under your skis, thought George as he plummeted down the slope with reckless abandon.

"George, look out for that hump!" shouted Harry.

"WHOOOOOOA!!!"



Up and over he went. A ski flew, cutting into the path of another skier, causing him to fall and tumble down the slope. George made a one-point landing (stranger things have happened), regained his balance, and noticed a pine tree waiting to make his acquaintance. He dodged the tree, using his pole and knocking himself off balance again. He was forced over another hump. While airborne this time, his lone remaining ski deserted him, soaring through the air. George landed with a thump and tumbled in a mist of snow coming to a halt on his back about 15 feet down the slope. Moaning, he looked up—guess what he saw? What goes up must come down, including skis. THWACK!!! The ski rammed George in the ribs. Harry arrived about a minute later to help the Hapless Huckster.

"George, George, you OK?" sputtered Harry, kneeling beside the crumpled mass.

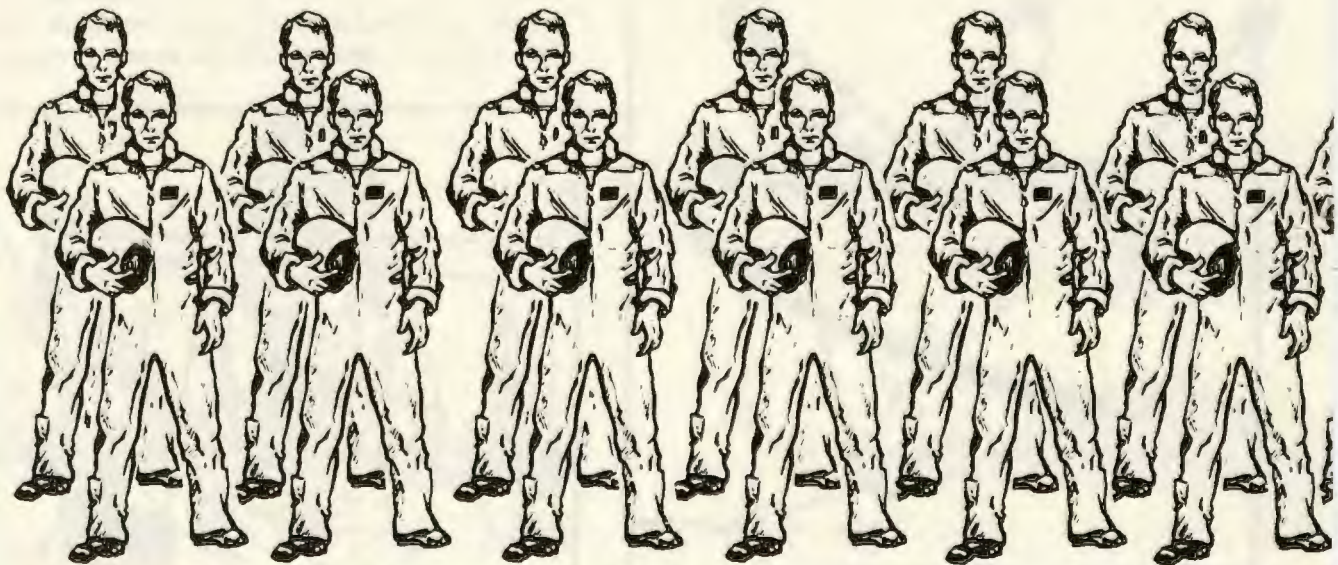
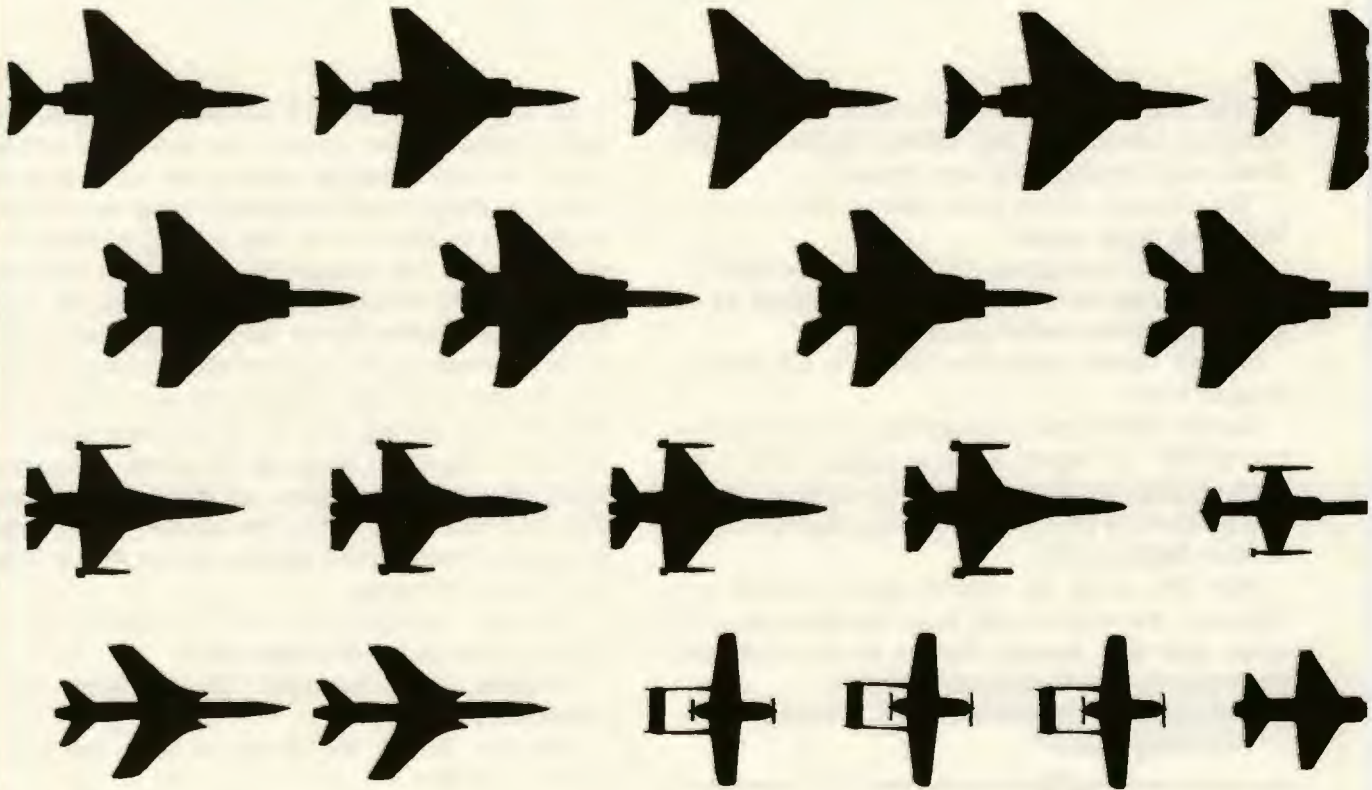
"Ohhhhh, who are you? My side—my leg," moaned George.

"You just lie still; the ski patrol is on the way," comforted Harry.

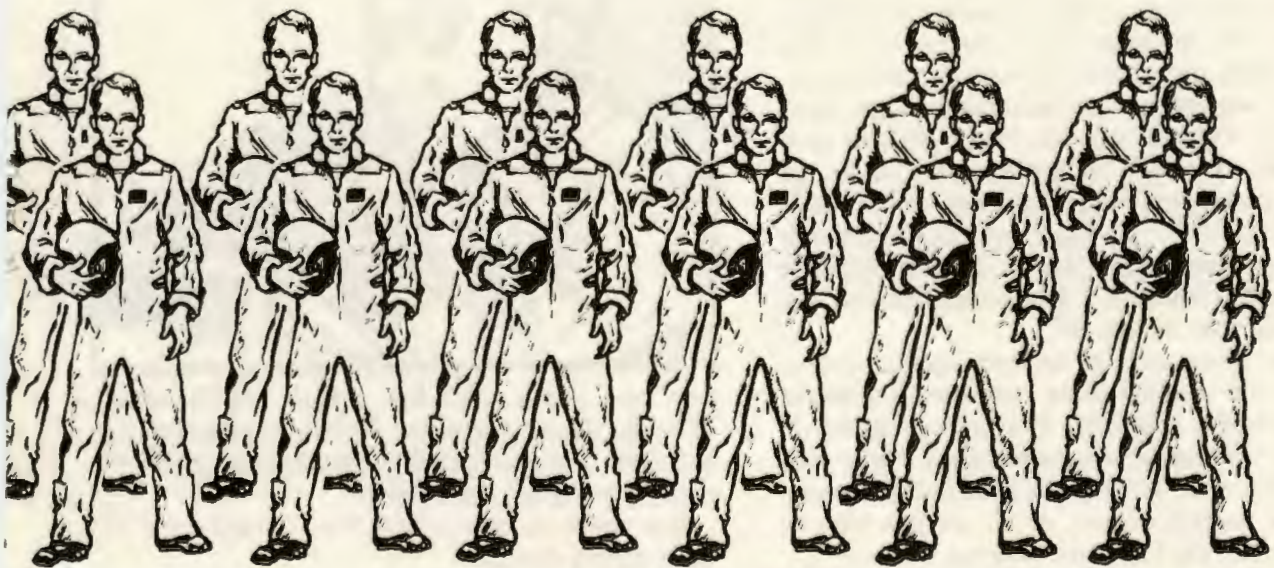
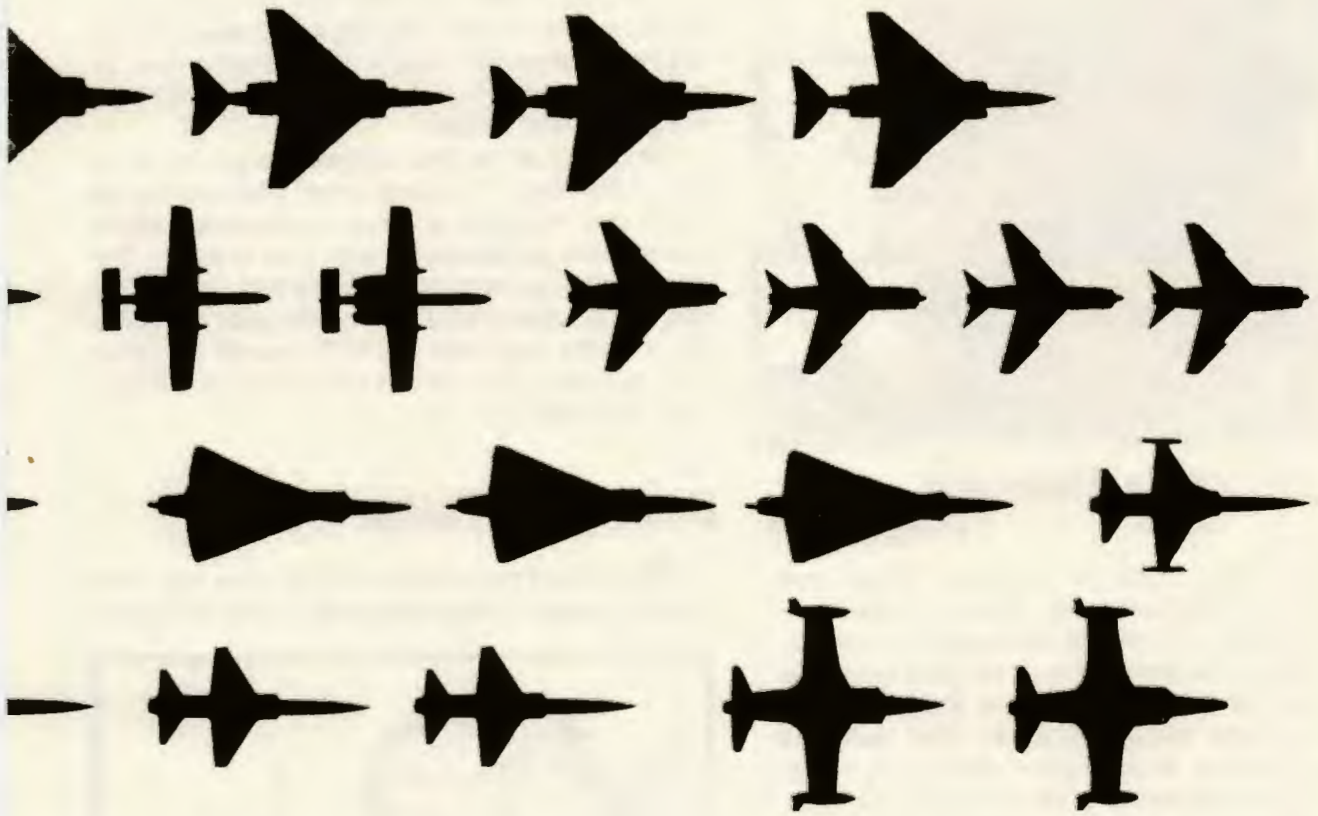
The ski patrol took George to the infirmary. He had a concussion, two cracked ribs, and a broken leg. The ski run lasted three minutes. The results lasted eight weeks—it takes a while for bones to mend. ➤



# TAC AND TAC-GAINED (ANG & AFR) LOSSES JAN-DEC 1981









## Flu or Carbon Monoxide Poisoning?

Winter also brings on increased danger from carbon monoxide poisoning. Carbon monoxide is produced by the incomplete combustion, or burning, of an organic material. Since we do more burning in the winter to gain heat, it's only logical that we generate more carbon monoxide. That increased carbon monoxide also dissipates more slowly in cold weather because we try to keep the cold, but fresh, air locked out of our houses and cars.

Since we cannot see, smell, or taste carbon monoxide, we don't know when it's a danger to us. The warning signs of carbon monoxide poisoning—headache, weakness, dizziness, nausea—are similar to the flu or a bad cold; and that might lead us to take the wrong action, like going to bed in a house filled with carbon monoxide. Because carbon monoxide combines with our body cells more efficiently than oxygen does, it deprives us of the oxygen our bodies need to sustain life. When we go to bed with the "flu," we may not get up.

Furnaces, charcoal grills, kerosene space heaters, and our cars are the most common sources of carbon monoxide poisoning. The key to protection is ventilation and preventive maintenance. Have your car's exhaust checked. Have a professional inspect your home heating system. And if anyone feels ill, make sure that the treatment includes fresh air.

## Pickup Prangs Pitot

Maintenance and weapons troops were working on an F-16 at the same time. The maintenance workers were using a Dash 60 power unit for electrical power and cooling. A load crewmember got into a pickup truck to return to the shop. Just as the driver put the truck in gear, the Dash 60's air hose disconnected from the aircraft, making a loud noise. With air still flowing through it, the hose thrashed around on the ramp, sending up sparks when the metal connector hit the concrete.

The maintenance crew scattered to get out of the way of the hose. The pickup driver, after hearing the noise, saw the sparks and the maintenance workers running and so decided it was time to panic. The driver bailed out of the pickup and fled on foot. The abandoned pickup truck, still in drive gear, rolled into the aircraft's pitot tube. An NCO nearby saw what was happening, but couldn't get to the pickup before it collided with the F-16.

## Don't Be a Pusher

We've read that 15 percent of all those who drink alcohol develop a dependence on it. Think about that



next time you're at the bar: If there are 20 people drinking, the odds are that 3 of them have drinking problems. Are you helping them out of their problem, or are you part of the problem?

Don't be an alcohol pusher. For at least 3 out of 20, it's a deadly poison.

## Winter Battery Troubles

This is the time of year when our jumper cables get the most use. The cold weather is rough on a battery. But a more frequent cause of our car's failure to start is corrosion in the clamps. Cleaning the clamps and terminals may solve your problem.

If that's not the problem, you may need a jump start; but before you try it, check the battery. If it's frozen, it could explode when you try to jump it. Make sure it's not frozen before you start.



When you're ready to start the dead battery, bring the other car alongside, but don't let the two cars touch. Recheck that both cars have 12-volt systems. Turn off the ignition and accessories on both cars and shift them into neutral or park; set the parking brake.

Attach one end of the jumper cable with the red clamps to the positive (+) terminal of the good battery and the other end to the positive terminal of the discharged battery. Next attach the cable with the black clamps, first to the negative (-) terminal of the good battery and then to the *engine block* of the car with the bad battery. The last connection should not be near the battery to avoid the chance that a spark might ignite the battery gas.

Now start the car with the good battery and then the car with the bad battery. Remove the jumper cables in the reverse order from the way you connected them, beginning with the black clamp on the engine block.

Anytime you're working near batteries, protect your eyes. And be careful that any metal you're wearing doesn't touch an electrical connection. Before jump-starting a car with a positive-ground electrical system, consult the owner's manual.

## A Success Story

Yes, it can be done safely. The 682d Air Support Operations Center Squadron drove almost 57,000 miles in one month without a mishap and with only minor maintenance problems. The 682d is part of the 507th Tactical Air Control Wing at Shaw AFB, South Carolina. The unit maintains 87 tactical vehicles, including jeeps, trucks, mobilizers, refuelers, a forklift, and a wrecker. Much of the mileage was driven when 80 of the vehicles took part in a deployment to Eglin AFB, Florida, for exercise BOLD EAGLE 82.

## Keep Rolling in the Snow

The secret of moving safely on slippery wintry surfaces is to avoid abrupt changes in speed or direction. Keep your eyes well ahead of your car so you can anticipate lane changes and turns and make them gradually.

Don't follow too closely—you need all the margin for error that you can get when roads are unpredictable. Slow down when approaching intersections or expressway exits.

Be wary of warming trends. Ice is twice as slippery at 30 degrees as it is at 0 degrees. Ice patches in areas shaded by woods or underpasses can throw you. If you hit an icy spot—ease up on the gas, hold the wheel steady, and roll through.

If you do start to slide, don't panic and don't hit the



brakes. Take your foot off the gas and turn your wheels in the direction that you want the car to go. When you feel the skid is corrected, straighten your wheels.

—National Safety Council

# OUR LOSSES:

## JANUARY - DECEMBER 1981

**AUTOMOBILES**



**MOTORCYCLES**



**DROWNING**



**PRIVATE  
AIRCRAFT**



**FIREARMS**



**OFF-ROAD  
VEHICLES**



**FIRE IN  
QTRS**



**THERE WERE  
NO LOSSES ON DUTY  
IN 1981.**

## CHEAP DYNAMITE :

# WHEN MORE IS LESS



**By Capt Ken Pesola  
HQ TAC Explosives Safety**

And then there's the story about the security police who had some dogs. These were not your ordinary, routine canines, but unique, highly intelligent, and trained examples of their breed—capable of “sniffing” explosives in the darkest of night.

This is a tail [sic] of the training program designed to maintain our trusty four-footed friend's aromatic sensitivity.

AFR 125-5 gives us specific procedures for acquisition of training items and quantities of explosives

authorized for use in the security police dog training program. For example, units are allowed to use two sticks of commercial dynamite.

Now we get to the crux of our narrative. After receiving some explosives safety training (which did not include information on the characteristics of explosives), security police representatives were dispatched by the munitions-accountable supply officer to pick up authorized quantities of explosives from an off-base commercial vendor. The vendor (who was obviously a DOD-budget-conscious citizen) offered the intrepid USAF representatives a bargain: For the cost of two sticks of dynamite, the vendor would let the security police have 15 sticks. No gimmicks, honest.

Unfortunately, when they returned to station (no doubt beaming with mercantilistic pride) the security police learned the stains on the dynamite wrappers were caused by nitroglycerin. As most of us know, nitro is sort of a sensitive commodity. Exuding nitroglycerin is a sure indication of old dynamite and a serious hazard.

Explosives ordnance disposal (EOD) personnel were summoned and they carted off and destroyed the aged sticks. We understand the procurement folks are still trying to get our money back.

What's the status of your security police explosives dog training program? Who picks up your explosives from the vendor? HQ TAC/SPP is supplementing AFR 125-5 to restrict security police from direct acquisition from vendors. Do your security police know what to look for in determining explosives item serviceability? Did you know commercially procured explosives often fail to possess the safety features we commonly take for granted in military munitions items and that commercial explosives are also commonly more sensitive to shock and that dynamite must be periodically rotated, IAW T.O. 11A-20-7-7, to prevent nitroglycerin exudation? Tovex 100, another authorized explosive used in security police dog training programs, has a shelf life of only one year. Procurement of unauthorized quantities of Tovex is blatantly wasteful.

The base security police are not the only people requiring explosives safety training and periodic monitoring by weapons safety representatives. Egress shop, small arms training, and explosives ordnance personnel should also be included in the weapons safety program.

Our story's moral is: Units with fully trained explosives handlers and sound procedures often save face—and lives.

# chock talk

*...incidents and incidentals  
with a maintenance slant.*

## **Tell Me Now, or Tell Me Later**

The night shift from an engine shop was working on an F-111. They removed the nose dome from the number 2 engine but stopped there and turned the job over to the day shift. The day shift finished the work and began to reassemble the nose dome when they noticed they were short one spacer. They searched everywhere they could think of but couldn't find the spacer. So they got a new one and finished the job, without telling their supervisor about the missing spacer.

Then the night shift came back on duty. They did the required 7-level intake inspection and ran the engine. After they shut down, they inspected again, but no problems were noted. The crew made some adjustments and again ran the engine. After they shut it down this time, they inspected the intake and found damage to the first-stage blades. When they looked in the exhaust section of the engine, they found the missing spacer.

The circumstances aren't unusual. Whenever a job is transferred from one shift to another, the risk of FOD rises. It's hard enough to keep track of our own hardware; it's doubly hard to account for everything on a job we inherited. But we have to. And if something turns up missing, we better tell someone. Our supervisors would rather not wait to be told when the missing part has chewed up an engine.

## **Incomplete Investigation**

After what appeared to be a normal mission for his A-10, the crew chief discovered damage to the left engine's fan blades, nose cone, and inlet extension. A tridair fastener from panel F-79 was missing. A closer look at that panel showed that it had a dash-4 fastener in a dash-2 location, a dash-4 fastener in a dash-6 location, 16 retaining rings missing, and 10 retaining rings separated from the fasteners behind the panel.

That panel had been recently removed and replaced to follow a TCTO which called for a ground-the-fleet inspection. A 7-level supervisor had signed off an in-process inspection for every aircraft which was worked on. But he did a really thorough check only on the aircraft scheduled to fly the next day. On the aircraft not scheduled, he only did a quick visual check. He left a note for the next shift to redo the inspection. The note was soon lost and forgotten, and the panel was never thoroughly inspected.



Stop and think about what this supervisor did. He passed on information about the real status of the aircraft on a note instead of in the aircraft forms—forms whose only purpose is to pass on the status of aircraft to those who need to know. Does this make sense to you?

## Flight Control FOD

A T-38 in another command was flying a functional check flight (FCF). Midway through the final turn of an overhead pattern, the pilot found he could not move the control stick aft of neutral. He was able to go around, and the controls felt better when the gear and flaps were raised.

The pilot decided to fly a no-flap, straight-in approach. He put the gear down about 5 miles out on final approach. At 1 mile he felt the controls binding again. Unable to move the stick aft, he controlled the sink rate with thrust and landed the aircraft.

Maintenance investigators found a doubler, which is used to repair cracks in engine bay formers. Apparently, someone dropped the doubler and it fell into the lower keel area between the two engines. Whoever dropped it didn't retrieve it. Vibrations during flight caused the doubler to eventually work its way aft where it jammed the flight controls.

## Murphy's Corollary

Toward the end of its mission, the F-4E began to have problems. First, the right-generator-out light came on. The right generator wouldn't reset, and the right oil pressure and fuel flow read unusually low—45 psi and 2600 pph, respectively. The pilot pulled the right throttle to idle and declared an emergency. Shortly afterwards, the utility hydraulic pressure dropped to zero.

The pilot tried to lower the landing gear normally, but only the two main gear came down and locked. So the aircrew blew down the gear and flaps pneumatically. When they did, the right engine autoaccelerated to 100 percent rpm. Both aux-air-door

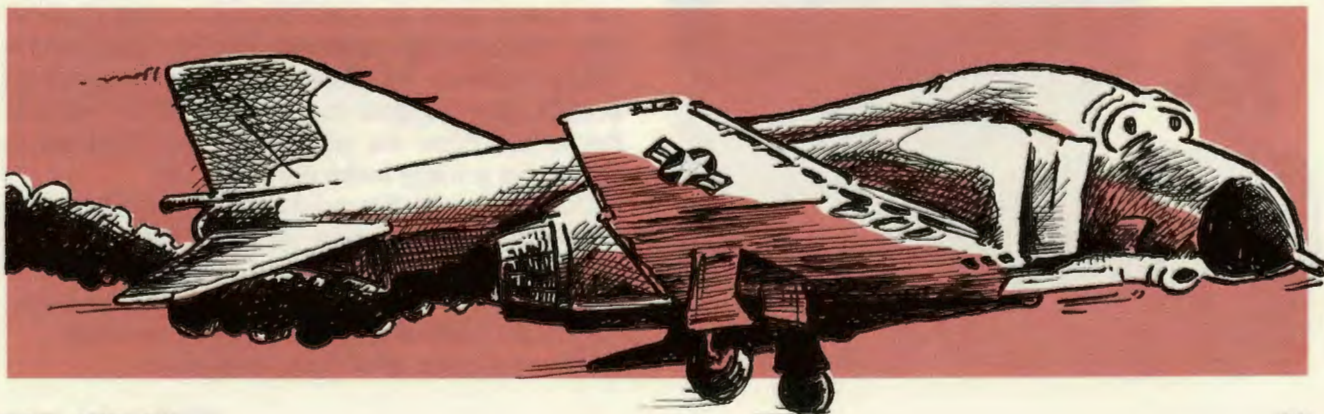
lights were lit up. The right oil pressure increased to 70 psi during the autoacceleration.

The pilot moved the right throttle forward and back to see if the engine would respond to the throttle. The throttle was stiff, and the engine didn't respond; so the pilot put the throttle back in idle. He used the left throttle to control his airspeed on final approach. They landed; and as soon as the aircrew were sure they had engaged the barrier, the pilot shut down the right engine. They controlled the roll backwards in the barrier by using the emergency brakes. Then the left engine began to autoaccelerate. They shut it down also and climbed out of the airplane. Smoke was coming from the right engine, but no fire erupted.

The aircraft was impounded. Investigators looked into the right engine bay and saw that the upper V-band clamp connecting the bleed air duct to the firewall had become dislodged. The duct ends separated allowing extremely hot bleed air to escape and wreak havoc. The aircrew didn't get a fire warning because a connector in the fire loop was broken.

The V-band clamp had been installed wrong after completion of a turbine change. Special training on installing the clamp was required by a numbered air force message sent out just a few months before this incident. According to the training records, all of the engine specialists and inspectors had received the special training. But none of the 7-level or higher supervisors in the airplane-general (APG) sections, including those with "all systems" authority to clear red-X discrepancies, had received the training.

The engine specialist who installed the clamp had not seated it evenly around the duct edges. The specialist's work was inspected by an APG supervisor who had not received the special training on inspection and installation of V-band clamps. The APG supervisor really wasn't qualified to inspect the work. Naturally, that's when the work was done wrong; that's Murphy's Corollary.



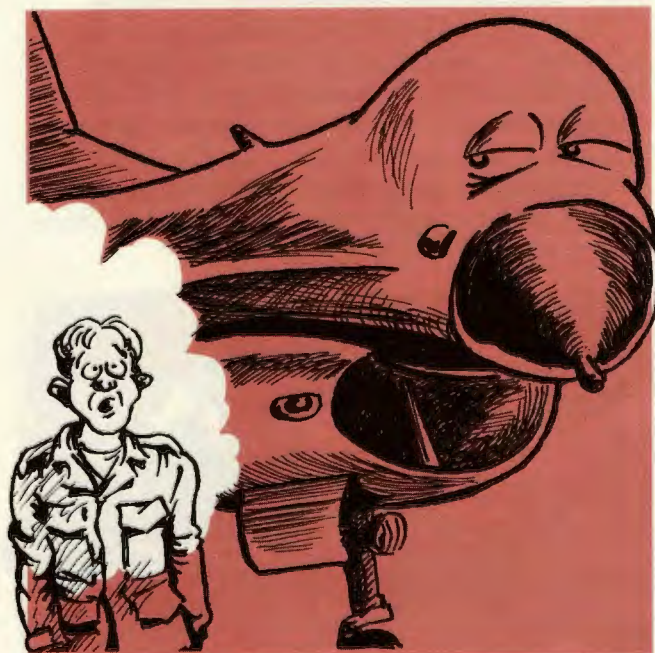
# CHOCK TALK

## Check Before You Swap

After checking that the EPU switch was off, the F-16 pilot directed the crew chief to pull the EPU safing pin. About two seconds later, the EPU fired. The crew chief told the pilot that the EPU was running and asked him to shut down the engine. The pilot rechecked the EPU switch off, went to 100 percent oxygen, and shut down the engine. The fire department responded quickly and firefighters wearing air packs pinned the EPU. Everyone involved was taken to the hospital and tested for hydrazine exposure. Eventually, they were all released, although the crew chief was kept 24 hours for observation.

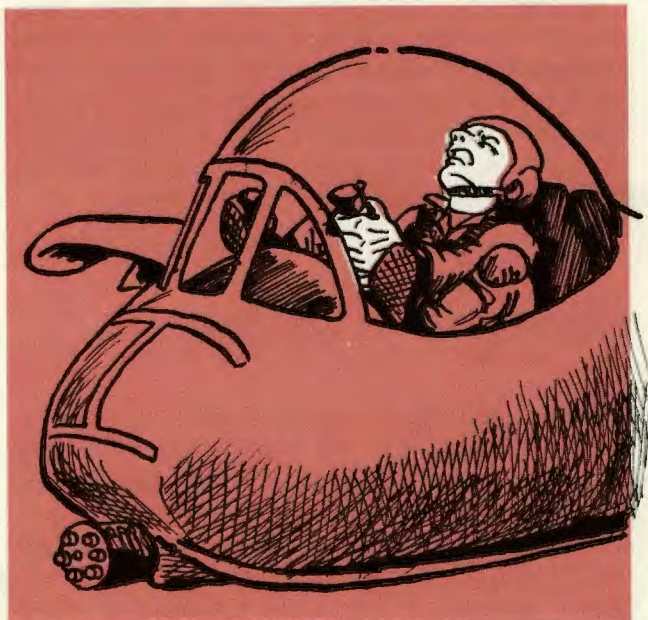
The cause of the EPU running was classic: the wrong test panel was installed because it fit. A block 5 miscellaneous-systems test panel was installed where a block 1 panel was needed. The two panels are not interchangeable; the substitution results in an uncommanded activation of the EPU when the safing pin is pulled. The crew chief and his supervisors failed to check the tech data before cannibalizing from a block 5 to a block 1 aircraft.

The F-16 has several panels and black boxes that are not supposed to be swapped between different blocks of aircraft. Even if the part fits, it may not be right. The only way to be sure is to check the tech data.



## Backward Bolts

The pilot started engines on an A-10. After a normal start, he checked flight controls. When he moved the stick to the right, it worked normally; but when he moved it to the left, he felt resistance about  $\frac{3}{4}$  of the way to full left. By increasing the force, he could force it full left. Then when he released it, it moved back to the  $\frac{3}{4}$  position and stopped. The pilot could not break the jam with one hand. With both hands he pulled the stick toward the center. The left-aileron-disengage warning light came on just before the stick broke loose and centered. The pilot ground aborted.



Troubleshooting indicated the bind was in the left actuator area. When the investigators removed the number 1 pylon covering, they were able to see a pushrod that had its bolts installed backwards. The job guide says to install the bolts from outboard to inboard. Because the bolts were reversed, a cotter pin which safes the bolt-nut unit on the pushrod didn't have enough clearance from the fairing for the aileron actuator. The cotter pin got hung up on an access panel support ring, which is on the inside of the fairing. When the pilot forced the stick back to center, he actually broke the cotter pin.

The left actuator had been changed about a month before this ground abort. The airplane had flown quite a few times with a strong chance of a control jam. When this unit checked the rest of their A-10s, they found another one with the bolts reversed.

We hope that's all of them, everywhere.





**By Maj Tim Black**  
**926 TFG, Air Force Advisor**

In this old world of ours, not much comes free. But we're fortunate right now because our daily training is just that—free. The lessons learned are free; the aircraft systems knowledge is free; the aircraft handling characteristics are free; low-altitude awareness is free. When you're on a LATN to a MOA, there's no bandit rolling in at your 6 o'clock with live ammo. In a MOA while pulling off of a FAC's target, there's no smoke trail headed at you or your wingman. On a scorable range while strafing, as you look through the gun cross and squeeze off 25-30 rounds, it's just a parachute panel, not a moving tank or a truck.

One day the whistle goes off at o-dark-thirty: "Shoot, another one of those fun-for-a-day mobility exercises. What? This one's for real? You gotta be kidding. I don't have the right stuff in my mobility bag. I'm on the first ISE that leaves in four hours? But, but . . ."

Ten hours to base Y—crew rest—first cell of A-10s arrive—quick turn—swap out—ten hours and arrival at Base X. Buildings on fire; air raid is over for now. Sirens. Debris all over. Holes in the ramp. This is for real. "Which is the highest threat on the RWR? Do I

remember the wing standards? Do I use chaff or flare for an SA-9? Does a MiG-23 have a gun? What mil size is a tank at 4,000 feet? Where do the hydraulic lines run for my flaps? If I have to use manual reversion to get home, what flight controls do I have automatically?" Questions, questions, questions . . .

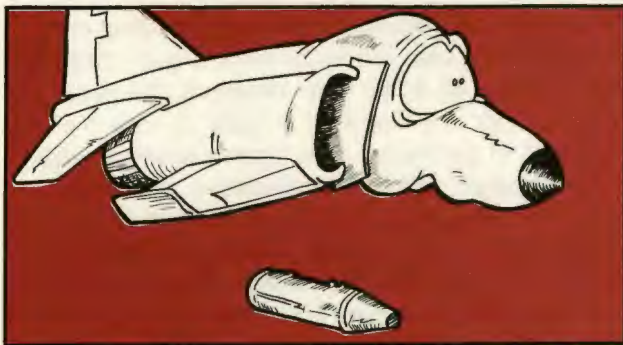
Well, the freebies are over. You either know your stuff or you quickly learn it at some expense or you don't come back from the mission. The first is why we practice. Get it while you can. Take advantage of all the free training time we have available. IPs challenge the flight leads on each mission. Flight leads challenge your wingmen, and wingmen make your flight leads challenge you so that you get all the experience you can before you're out front. Be creative on your flights. Don't just brief another old standard scorable range ride: formation takeoff, LATN to the range, low to high for events, maybe a Maverick pass if we have time, you lead back and we'll shoot patterns—OK, let's go.

I don't mean to be preaching to the choir. I just feel we could put a little more into our everyday locals. Some pilots do, some don't. Don't shortchange yourself or your wingman; the next whistle at o-dark-thirty may not be a practice. When is the next overseas deployment for your unit? ➤

# WEAPONS WORDS

## From Preventable to Inevitable

Overseas, an F-4D lost a SUU-21 dispenser on the range. The Phantom was flying an air-to-ground mission configured for practice special-weapons deliveries. On the first pass with all the switches set for normal release, the pilot pressed the bomb release button; the SUU-21 fell off the right inboard station.



When the aircraft returned home, the cause of the release was quickly discovered. Even though the right inboard MAU-12 cartridge retainers had been safety wired and sealed, the impulse cartridges were still installed. Impulse carts shouldn't have been installed when carrying a SUU-21. Safety wiring and sealing the breeches is the tech order way to indicate that the breeches are *empty*. Yet somebody had wired and sealed the breeches without checking them.

It turned out that a few days earlier the aircraft had been loaded with CBU-58s which required the impulse carts. After the CBUs were downloaded, the right inboard station's breeches were safety wired and sealed with the cartridges installed. But the error



alone needn't have caused the incident. To complete the chain of errors, the SUU-21 had to be loaded without a functional check being made of the station, because a functional check would have revealed the carts. Sure enough, the load crew didn't do the check before or after loading the dispenser.

Now the stage was set for the mishap. The aircraft crew chief and the aircrew could do proper preflights and still be misled. The safety wire and seal told them the breeches were empty. The arming crew at the end of the runway would be misled the same way. What could have been easily prevented rapidly became inevitable.

## Believe the Book

An F-16 came back from a surface-attack sortie with a dent in the leading edge of the left horizontal stabilator. The aircraft had dropped BDU-33s from a SUU-20 dispenser. The pilot had released the practice bombs at 15 degrees of bank. The Dash One limits the bank angle for release of BDU-33s from a SUU-20 dispenser to 5 degrees because weapons released in excess of 5 degrees of bank will probably contact the aircraft.

Yep, they probably will.

## Pyrotechnic Educates Instructor

An instructor in another command was policing up the training area after a class which used explosive devices. He found a partially expended ground-burst simulator (M115A2). At first he tried to burn the rest of it with a smoke grenade, but it didn't work. Then he picked up the simulator. He noticed powder coming out of it; so he put it back on the ground. About this time, another instructor came by. He gave the first instructor another smoke grenade and told him to set it off at a safe distance from the ground-burst simulator and then toss it at it to see if that would ignite the powder.

Now, we ought to point out that this unit had, and still has, an operating instruction which clearly states that "at no time will cadre personnel dispose of any malfunctioned pyrotechnics."

Despite that warning, the instructor set off the smoke grenade about three or four feet away from the simulator. Then he dropped it on the simulator. Instantly it exploded in his face.



He was lucky: he only suffered first and second degree burns on his face and wrist. His eyes weren't damaged, even though he wasn't wearing safety goggles. But he probably won't mess around with a misfired explosive again. The rest of us can learn the same lesson without the burns.

## Out of Position

A missile maintenance technician overseas was taking a warhead test adapter off an AIM-7F guid-

ance and control unit. He used an ADU-432/E missile adapter assembly to support the missile as he took it apart. First, he took off the flight control section; then he demated the warhead test adapter from the target detector section. He picked up the warhead test adapter and turned slightly away from the stand. Just then the target detector section began sliding off the ADU-432/E stand. It fell to the concrete floor, shattering the radome.

When the technician had first positioned the missile on the stand, he hadn't placed the target detector on the stand's chocks the way the tech order showed. So when he removed the warhead test adapter, the center of gravity of the target detector shifted forward of the front chock. The detector tipped forward and slid from the stand.

This neglect of the tech data in positioning the missile on the stand probably seemed minor at the time. But it resulted in more than \$15,000 worth of damage.

## It Takes More Than One

When a weapons load crew installed a SUU-21 dispenser on the centerline station of an F-4E, they forgot to disconnect the secondary firing lead. No harm was done—right then. The airplane flew for a week, releasing practice bombs out of the SUU-21 without any problems.

A week later, another crew dearmed the aircraft and applied a seal which verified that the centerline was safe. Over the next few days, several different load crews worked on the aircraft. One of them armed the centerline station—why, we don't know. The centerline breach access panel could be opened without breaking the seal; so the seal still indicated the centerline station was not armed.

The next time the aircraft flew a range mission, the SUU-21 dispenser came off when the pilot tried to release a practice bomb. All cockpit switches and indications had been normal.

Notice the chain of events involved here. One load crew didn't disconnect the secondary firing lead as the tech order requires. Another load crew put the seal on in such a way that the access panel could be removed without breaking the seal. And then a third crew, or one of the other crews on a separate occasion, armed the centerline station, again in violation of the tech data. It's rare when one action causes a mishap; it usually takes two or three of us to foul things up.

# PROGRAMING YOUR OWN ON - BO



**By Robert E. Coward,  
Aeronautical Systems Division,  
Wright-Patterson AFB OH, and  
William H. Nelson, PhD,  
Air Force Human Resources Laboratory,  
Williams AFB AZ**

"Fox four-one, this is Berkle Control, squawk two-zero-four-one, then turn to heading zero-five-five. Contact Berkle Approach prior to leaving your assigned altitude—"

"Fox four-one, this is Fox four-two. Do you have left-engine problems? You're trailing a heavy smoke plume. Fox four-one, do you read?"

A busy day in the cockpit for ol' 41. Sounds as

though he has lots of information coming at him from outside and inside his aircraft. His problem is something like the bells ringing and lights flashing at the desk of a very busy executive office. Information processing can be difficult at such times.

In the November 1979 Angle of Attack editorial, Colonel Richard K. Ely expressed a concern about "our own human capability to process data" compared to the vast amount of information blasted at our sensory systems, such as might occur in the cockpit environment of today's fighter and attack aircraft. He was expressing appropriate concern about task saturation, particularly at those critical times when an emergency exists and an incident or accident may occur. Since then, TAC has devoted considerable effort and resources toward analyzing task saturation and providing aircrews more information about the perils of inattentiveness to crisis in the cockpit. Still, the problem exists today and continues to grow as TAC's missions become more diverse.

Our point of task saturation is directly related to our aptitude and trained capability to process information. Associated with this is our ability to organize and make decisions about information that has been received by the senses (sight, sound, smell, taste, touch). In organizing, we may well mentally set up priorities.

The cognitive domain (our thinking cap, or better, *our own on-board computer*) does have varying levels of capability based on how the system is matured (programed). The maturing (growth) processes occur throughout our lifetime of experiences which include training. This training, or programing, of our on-board computer prepares us for information processing and organizing of the various tasks that come along in flying today's mission.

Radar presentations and the various head-up displays provide compelling visuals that demand an aircrew's attention. Cathode-ray tube (CRT) technology and instrument miniaturization have allowed engineered features to be placed into all corners of the cockpit. But aircraft computers cannot make all the decisions. So the question is, with these complex aircraft, how can aircrews and training managers help mature the executive in the cockpit—like ol' Fox 41—before critical mission or safety decisions must

# ARD COMPUTER

be made?

Information processing must be approached from two angles: the aircrew's potential and the training system's responsibilities. First, we must understand that potential for increased information processing and decision making is somewhat similar to physical fitness potential. Much of the cognitive structure (mental and sensory systems) requires exercise and peaking just like the body's muscle system. By studying the cognitive processes (input, processing, output), aircrews can become more aware of personal potential for increased information handling. As the body can be trained to increase muscle power so can the cognitive system be conditioned to handle and process information more effectively.

Task saturation, or task overloading, is a function of how much information you can assimilate or move through your *own on-board computer*. As with physical limitations, you should become aware of mental workload limits in your mission environment and determine how you match up to those limits. You may find that training for increased information handling potential should be a continuing part of your professional growth.

The other angle that deserves consideration for increasing information-processing potential is the approach training managers take in training aircrews to make decisions. The challenge is there and should be accepted by developers of flying training academic programs to become intimately familiar with the current knowledge about development of cognitive processes. The technology exists; it should be taught in flying training programs. By studying the decision-making processes aircrew members can better prepare themselves to deal with periods when information processing and organizing are at peak levels.

As students progress from basic flying training to mission-ready aircrews their concept of the mission matures based on building blocks of information. This maturing process develops in such a manner that the individual must learn some lessons before he can use other information about the mission. As the individual matures, expansion of information processing can occur if the building blocks form a sound foundation of data about how the aircraft and its

weapons fit the mission. The organization and sequencing in which these blocks are presented can both facilitate and enhance learning. A solid, comprehensive understanding of the mission requirements will allow the aircrew to organize information, setting priorities for decision making.

Consider this: In the business world many executives bail out of critical situations or make bad decisions because they are not trained to process the information that is available to them. Some tend to make decisions on the latest information available without ever considering a second opinion. A rapid drop in some commodity may only be an indicator of trouble or it may be critically important to future profits.

In the same way the aircrew may have to decide on bailing out or coming home, completing the mission or returning another day under better conditions. Either or both decisions may have to occur during the same time frame. Fox 41 might well need that bit of news about the smoke trailing him, especially if he missed getting the information from an on-board source.

Awareness of cognitive potential and training for improved decision making are conditions we need to attend to in today's modern, computer-enhanced, flying environment. Your own on-board computer requires periodic updating and modification. Good thinking habits can help you quickly set information priorities in an emergency and decide what to do and when to do it. By organizing your thinking to consider the various elements of the mission, the conditions that must be faced, the capabilities of the aircraft, interactions that must occur with other aircraft and controllers, the expected end result of the mission, potential emergencies, and probability of mission success, you can be better prepared to deal with cognitive task loading. You will respond to unexpected events more logically if you have done a good job of thinking out the complete mission in advance.

Keeping in mind that the mission is vitally important, it is also essential to consider how you will deal with potential emergencies—how you plan to react based on the information available to you, where your best source of assistance is, and how all of this type of thinking might help in making the decision whether to press on regardless or to fly a safer mission

"Fox four-one, this is Berkle Approach. You are cleared for immediate landing on runway two-five. Emergency vehicles are responding." ➤

# FIGHTER PILOTS, INCORPORATED



By Maj James M. Peck  
Flight Commander, 13 TFTS

How many times have those of us who push jets around the sky heard from our supervisors and safety officers that while airborne we are "presidents of a multimillion-dollar company?" Let's take a minute and look at this analogy. Comparing the costs of an F-15, F-16, F-4, F-5, or A-10 to a few of our well-known civilian corporations, we find some interesting similarities. The Fall 1981 Edition of *Moody's Handbook of Common Stocks* lists the 1980 gross revenues of some well-known corporations as follows:

1. The entire McDonald's Restaurant Corporation grossed some \$2.2 billion, a little more than a wing of F-15s.
2. Anheuser-Busch, \$3.3 billion.
3. Coca-Cola, \$5.9 billion.
4. General Dynamics, \$4.7 billion.
5. Playboy, \$400 million.

Each of these corporations can be subdivided into their smaller multimillion-dollar subsidiary companies, much the same way that we could think of our multimillion-dollar jets as subsidiary companies to the multibillion-dollar Fighter Corporation.

One could, perhaps, argue that our presidency entails only one to two hours per day, five days a week, while our civilian counterparts are presidents for 24 hours a day, seven days a week. Nothing could be a greater distortion of the truth. Although we are actually airborne for only that hour or two a day, the remainder of our working day is filled with personal efforts to ensure efficient, productive, and safe flights. Accordingly, the civilian company president acts directly as a president for, perhaps, a couple of hours a day: chairing board meetings, signing papers, and the like. The remainder of his day is spent developing and managing new ideas to make his company run more efficiently and safely. Is this unlike our development of new tactics and better ways of doing our job? In order for a corporation to be productive, whether civilian or military, each subsidiary company must operate productively; i.e., "The whole is a summation of its parts." The effects of one company going under are felt throughout the corporation.

By now, many of you are probably thinking, OK, you've convinced me that I can equate myself with a company president. What's the point? The point is this: How many company presidents have you heard of that have intentionally subverted their own company by premeditatedly doing something that they know is dumb? Probably not many.

Recently, in TAC there have been incidents of fighter pilots flying without discipline. Some of these have had tragic results. How many more have gone unreported? We professional fighter pilots have a responsibility to our supervisors, our peers, our corporation, our country—but mostly to ourselves—to fly a safe, efficient jet in order to make our very own company productive. The alternative is, at best, a weak link in the chain; at worst, termination of our company—forever.

# TAC TALLY



CLASS A MISHAPS	▶
AIRCREW FATALITIES	▶
TOTAL EJECTIONS	▶
SUCCESSFUL EJECTIONS	▶

TAC		
DEC	THRU DEC	
	1981	1980
2	32	30
2	20	18
3	28	32
2	24	27

ANG		
DEC	THRU DEC	
	1981	1980
1	7	12
0	3	10
1	3	11
1	2	7

AFR		
DEC	THRU DEC	
	1981	1980
0	1	3
0	1	1
0	1	3
0	0	2

## TAC'S TOP 5 thru DECEMBER '81

**DUE TO A TYPOGRAPHICAL ERROR LAST MONTH, WE LISTED THE 363 TFW INSTEAD OF THE 366 TFW IN TAC'S TOP 5.**

TAC FTR/RECCE	
class A mishap-free months	
39	1 TFW
38	31 TTW
26	49 TFW
25	355 TTW
21	366 TFW

TAC AIR DEFENSE	
class A mishap-free months	
107	57 FIS
60	5 FIS
57	48 FIS
16	318 FIS
7	87 FIS

TAC-GAINED FTR/RECCE		
class A mishap-free months		
116	188 TFG	(ANG)
108	138 TFG	(ANG)
107	917 TFG	(AFR)
104	116 TFW	(ANG)
94	434 TFW	(AFR)

TAC-GAINED AIR DEFENSE		
class A mishap-free months		
94	102 FIW	
90	177 FIG	
56	125 FIG	
39	119 FIG & 142 FIG	
29	144 FIW	

TAC/GAINED Other Units		
class A mishap-free months		
149	182 TASG	(ANG)
142	193 ECG	(ANG)
137	26 ADS & 4787 ABGp	
133	110 TASG	(ANG)
129	USAFTAWC	

## CLASS A MISHAP COMPARISON RATE 81/80

(BASED ON ACCIDENTS PER 100,000 HOURS FLYING TIME)

TAC	1981	4.0	3.0	3.2	5.6	6.0	5.9	6.3	6.2	6.0	5.3	5.0	4.9
	1980	2.0	4.0	5.2	4.4	4.7	5.2	5.3	5.2	4.8	5.1	5.0	5.0
ANG	1981	9.3	4.8	4.6	3.3	2.6	2.2	1.8	1.6	2.4	2.6	2.3	2.5
	1980	5.0	7.6	6.6	7.1	6.5	6.1	5.8	5.1	5.0	5.0	5.0	4.6
AFR	1981	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.4	3.0	2.8	2.5
	1980	0.0	0.0	0.0	0.0	0.0	4.3	3.7	6.5	8.9	7.9	7.3	6.8

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

FLEAGLE

GOOD LORD,  
TODAY'S VALENTINE!

Think  
SAFETY  
in  
82

HARDISON

DORIS IS GONNA  
KILL ME FER SURE.

SORRY,  
FLEAGLE.

© STAN HARDISON 1982

OH FOOT.

SOLD  
OUT

GREETING  
CARDS

CLOSED



SNIP! SNIP!  
SNIP!

CUT!  
CUT!

